REMARKS

Claims 1-9 and 15-25 are pending in the present application. Claims 1, 15 and 17 are the independent claims. Claim 17 was amended to conclude with a period. Claims 1, 4 and 15-17 were amended herein to more clearly recite the invention. No new matter has been added.

In the Official Action, dated October 3, 2003, claims 15-17, 20-21 and 23-25 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,330,572 (Sitka). Claims 1-9, 18-19 and 22 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Sitka. The outstanding rejections are respectfully traversed.

Affirmation of Provisional Election

As an initial matter, Applicants hereby acknowledge and affirm that Group I claims 1-9 and 15-25 were elected by teleconference by the undersigned on September 24, 2003. Accordingly, Group II claims 10-14 have been withdrawn herein without prejudice.

Request for Acceptance of Drawings

Applicants note that the Drawings filed in the present application have yet to be accepted as formal drawings. Applicants respectfully request acceptance of the drawings filed on August 24, 2000 by the Examiner.

Summary of the Invention

By way of brief background, it is sometimes desirable to migrate one or more portions of a file to remote storage while preserving the relationships of the original file. For instance,

for an append only word processing document, it may be desirable to save local storage by migrating portions of the file that are unlikely to change to remote storage – i.e., since it is append only, pre-existing portions are unlikely to change, and thus they need not be maintained locally. Yet, to the file system, the file should still be maintained as and appear as a single file.

As illustrated in Fig. A below, some systems, such as the system taught in commonly assigned copending U.S. Patent Application No. 09/644,677, provide a hierarchical storage management (HSM) system for handling such a scenario including mechanisms for specifying regions of a data stream suited to writes and updates (e.g., non-shaded regions of Foo) and those immutable or other regions of a data stream suited to off-line or remote storage (e.g., shaded regions of Foo). Yet, to the file system HSM1, it is one file (Foo) with one set of metadata, except that the metadata now describes the relationships of the migrated portions to the on-disk portions. Thus, in so doing, a method of generating metadata for describing a stream's or file's storage relationships is provided. It is in this context that Applicants identified a further need for updating the metadata in the event of a relocation operation, and for transferring such files among multiple file servers. In other words, a common approach does not exist to relocate, move or copy partially re-located files from one volume to another.

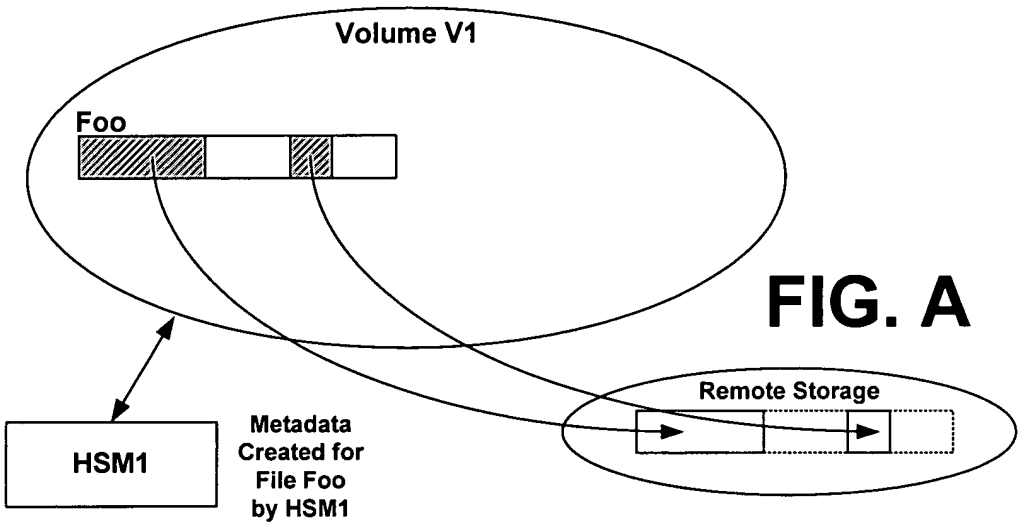


FIG. A

Thus, assuming a file management system that can describe, define or specify when a file has been partially stored in remote storage, the invention updates such description, definition or specification to reflect efficient relocation operations. Thus, for a file server for a computer system capable of identifying and specifying via metadata when a file has portion(s) that have been migrated to remote storage, the invention performs efficient relocation operations and updates the metadata in accordance with the same.

In particular, when a source file having portion(s) migrated to remote storage is to be re-located or copied by the HSM system to a target file, **instead of copying the entire file across all of its associated storage locations, the minimum or efficient set of data is relocated. The metadata describing the source file's migration storage characteristics is updated to reflect its new use in connection with the target file**. In another aspect, the invention provides a standardized way to communicate that metadata describing the distributed relationships of a file among multiple file servers.

Exemplary aspects of Applicants' invention are illustrated in Fig. 3, duplicated below.

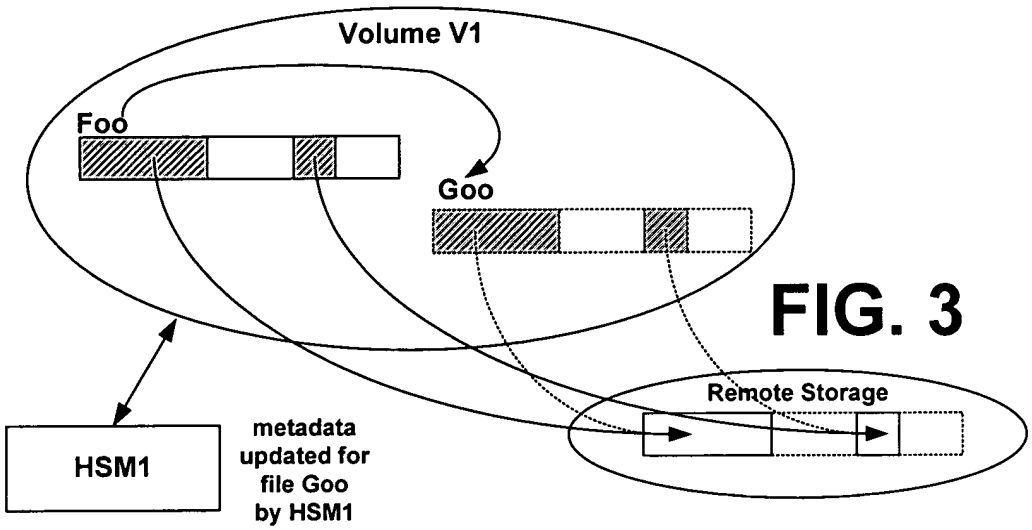


FIG. 3

Sitka and the Rejections under 35 U.S.C. §§ 102, 103

As mentioned, claims 15-17, 20-21 and 23-25 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by Sitka and claims 1-9, 18-19 and 22 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Sitka. The outstanding rejections are respectfully traversed.

Sitka relates to a system and method for managing the storage of files within an HSM system incorporating an architecture and methodology that facilitate the storage and retrieval of **large image files** as part of an overall image processing workflow. The system and method may be useful, for example, in handling the storage of images uploaded from scanned photographic film, or digital images submitted to a photo-processing shop by amateur or professional photographers. The client application can be a photo-processing application that could provide for various media formats, sizes, and quantities of image reproductions for a consumer. As another example, the system and method may be useful in handling the storage

of medical diagnostic images associated with a particular medical patient or study. In this case, the client application could be a picture archival communication system (PACS) that manages the archival of imagery for viewing by physicians. Further, the system and method may be useful in handling the storage of images associated with particular printing jobs, e.g., for publishers, advertising customers, and the like. In this case, the client application could be a digital prepress workflow application.

In brief, Applicants respectfully submit that Sitka does not even disclose or suggest a file system having a generic mechanism for migrating some portions of a file to remote storage (See Fig. A above) – let alone a generic mechanism for relocating files that have some portions of a file migrated to remote storage (See Fig. 3 above).

Moreover, the passages of Sitka cited in the Official Action have not been mapped to Applicants' to the actual language of Applicants' independent claims 1, 15 and 17 with any specificity, and accordingly, Applicants respectfully submit that nowhere has a prima facie case of anticipation or obviousness been made. Applicants respectfully request a more clear application of Sitka to the present invention.

For instance, Applicants respectfully submit that the passage located at Col. 9, lines 24-36, purportedly disclosing "an API for enabling a user to perform data migrating from a first storage location to a second storage location wherein the first and second locations can be on the same or different physical volumes" discloses no such thing. Instead, this passage of Sitka discloses that "the basic functions provided by the DSM client library are (1) establish secure connections to DSM server 14; (2) translate client API calls into networkable calls to DSM server 14; and (3) establish client-side data mover process 21 that allow data to move efficiently between user data streams or files 30 and DSM devices and media."

Similarly, Applicants cannot identify where Col. 14, line 45 to Col. 15, line 9 or where Col. 16, line 26-39 correspond to Applicants' invention, as recited in the claims. In short, Applicants respectfully submit that Applicants cannot respond with any particularity as to how a reference relating to the accommodation of large images in a computing system has anything to do with Applicants' claimed invention.

Accordingly, in view of how unrelated Sitka is to Applicants' invention, Applicants respectfully submit that Sitka cannot be said to teach or suggest a method of **relocating a first file, having at least one portion on-disk and at least one portion migrated to remote storage, to a second file** in a computer system, comprising **allocating space for said second file corresponding to said at least one on-disk portion of said first file, relocating said at least one on-disk portion of said first file to the corresponding space allocated for said second file, and updating metadata, previously generated for use with said first file, for use with said second file** (claim 1), **an application programming interface (API)** for use in a computer system **including a file having at least one portion stored in a first storage location and at least one portion migrated to a second storage location and associated metadata, whereby said API provides a standardized way to communicate said metadata, representative of the file's distributed storage relationships, among file servers** (claim 15), or a computer system, comprising **a source file, having at least one portion migrated to remote storage and associated file system metadata including information describing said at least one portion migrated to remote storage, a target file, wherein said source file is to be relocated to said target file and an application programming interface whereby said interface provides a standardized way to relocate**

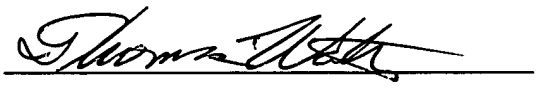
said source file to said target file and updating the associated file system metadata

(claim 17).

CONCLUSION

Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Office Action, and submit that Claims 1-9 and 15-25 of the application are in condition for allowance. Favorable consideration and passage to issue of the application at the Examiner's earliest convenience is earnestly solicited.

Date: December 23, 2003



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